

Claims

What is claimed is:

1. An adaptive optics system for minimizing the effects of scintillations on images received by the adaptive optics system, comprising:

a deformable mirror that is illuminated with optical energy;

a plurality of actuators for moving portions of the deformable mirror;

a wavefront sensor comprising a plurality of subapertures for receiving optical energy that is reflected from the deformable mirror and for determining a slope and amplitude of the optical energy in each subaperture;

a slope weighting function in communication with the wavefront sensor for receiving the slope and amplitude information for each subaperture from the wavefront sensor and for processing the slope and amplitude information;

a matrix multiplier in communication with the slope weighting function for receiving the processed slope and amplitude information and for generating control signals that control the actuators.

2. The adaptive optics system of claim 1, wherein the slope weighting function increases the weight of slope measurements for subapertures having amplitudes higher than an average amplitude.

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moving portions of the deformable mirror using a plurality of actuators.

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15. The method of claim 13, wherein the average amplitude measurement is produced by taking the average of the amplitudes of all subapertures.